Center Independent Research & Development: GSFC IRAD

LIBS Testing in a Venus Environment

Completed Technology Project (2011 - 2012)

Project Introduction

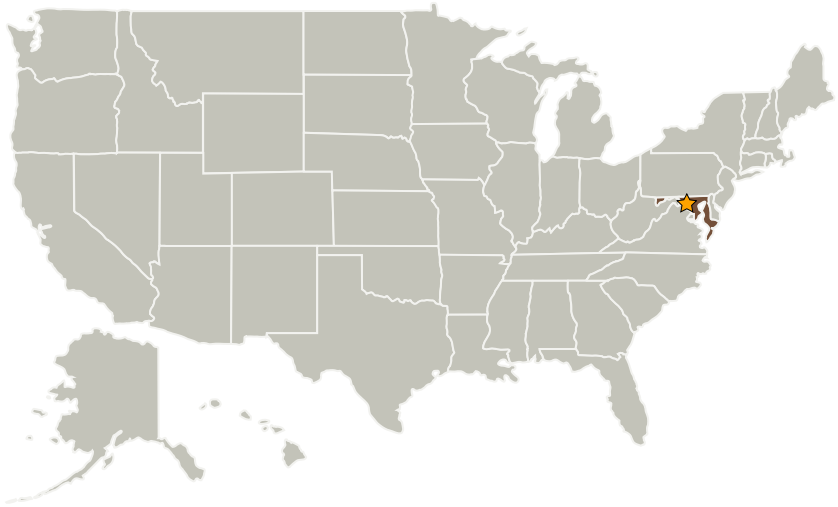
Demonstrate the feasibility of Laser Induced Breakdown Spectroscopy (LIBS) in a high temperature, high pressure, CO2 environment analogous to the conditions near the surface of Venus. Develop quantitative constraints on the capabilities and limitations of LIBS in a Venus surface environment.

Configure LIBS system to view samples in the Venus chamber Confirm STP results for LIBS in Venus Chamber configuration Conduct high temperature/high pressure experiments on Columbia River Basalt.

Anticipated Benefits

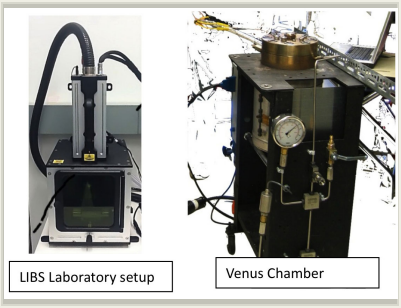
N/A

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Goddard Space Flight Center(GSFC)	Lead Organization	NASA Center	Greenbelt, Maryland

Primary U.S. Work Locations
Maryland



Project Image LIBS Testing in a Venus Environment

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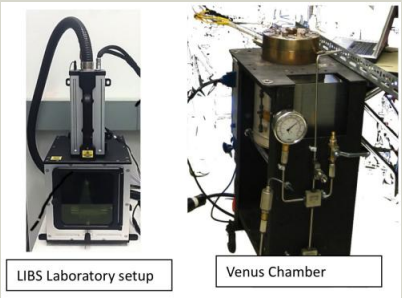
Images



5312.jpg
Project Image LIBS Testing in a Venus Environment
(https://techport.nasa.gov/image/1137)

Project Website:

http://sciences.gsfc.nasa.gov/sed/

Organizational Responsibility

Responsible Mission Directorate:

Mission Support Directorate (MSD)

Lead Center / Facility:

Goddard Space Flight Center (GSFC)

Responsible Program:

Center Independent Research & Development: GSFC IRAD

Project Management

Program Manager:

Peter M Hughes

Project Manager:

Brook Lakew

Principal Investigator:

Lori S Glaze

Co-Investigators:

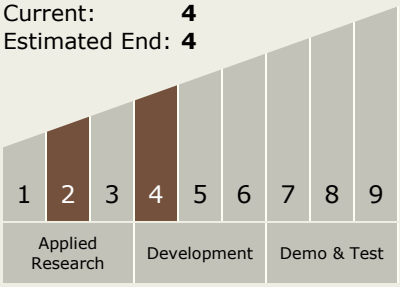
Steven Cagiano
Min Namkung
Natasha M Johnson
Ann M Parsons

LIBS Testing in a Venus Environment

Completed Technology Project (2011 - 2012)

Technology Maturity (TRL)

Start: **2**
Current: **4**
Estimated End: **4**



Technology Areas

Primary:

- TX08 Sensors and Instruments
  - TX08.3 In-Situ Instruments and Sensors